What is claimed is:

1. An electromagnetic wave absorber comprising composite magnetic particles having a grain size smaller than 10μm in which magnetic metal grains and ceramic are unified.

2. An electromagnetic wave absorber comprising composite magnetic particles in which a plurality of fine magnetic metal grains and ceramic are unified by enclosing said plurality of fine magnetic metal grains with said ceramic.

3. An electromagnetic wave absorber comprising composite magnetic particles in which magnetic metal grains and a plurality of ceramic grains are unified by embedding the ceramic grains into the magnetic metal grains.

4. An electromagnetic wave absorber according to any one of claim 1 to claim 3, wherein said magnetic metal is at least one kind of metal or alloy selected from the group consisting of iron, cobalt and nickel, and said ceramic is at least one kind of ceramic selected from the group consisting of oxide, nitride and carbide of iron, aluminum, silicon, titanium, barium, manganese, zinc, magnesium, cobalt and nickel.

5. An electromagnetic wave absorber according to any one of claim 1 to claim 4, wherein the magnetic metal grain and ceramic are unified by bonding the ceramic onto the surface of the composite magnetic particle.

6. An electromagnetic wave absorber according to any one of claim 1 to claim 5, wherein said composite magnetic particles have an average crystal grain size smaller than

50 nm.

7. An electromagnetic wave absorber, wherein said composite magnetic particles described in any one of claim 1 to claim 6 are dispersed in a material having an electric resistivity higher than an electric resistivity of said composite magnetic particles.

8. An electromagnetic wave absorber according to claim 7, wherein said material having a high electric resistivity is any one of a resin, an insulation polymer paint and a ceramic sintered material.

9. A method of manufacturing an electromagnetic wave absorber, wherein composite magnetic particles, in which magnetic metal grains and ceramic are unified, are formed through a mechanical alloying method of a magnetic metal powder and a ceramic powder.

10. A method of manufacturing an electromagnetic wave absorber, wherein composite magnetic particles, in which magnetic metal grains and ceramic are mixed and unified, are formed by a mechanical alloying method of a composite powder containing a magnetic metal powder and a ceramic powder using metallic balls or ceramic balls, size of said ball being larger than grain size of the metallic powder, a volumetric amount of said balls being larger than a volumetric amount of said composite powder.

11. A composite member comprising composite magnetic particles in which magnetic metal particles and ceramic are unified.

12. A composite member formed by compounding composite magnetic particles, in which magnetic metal grains and ceramics are unified, and a material having an electric resistivity higher than an electric resistivity of the composite magnetic particle.

13. A electromagnetic wave absorber formed by compounding composite magnetic particles, in which magnetic metal grains and ceramics are unified, and at least one kind of material selected from the group consisting of a resin having an electric resistivity higher than an electric resistivity of the composite magnetic particle alumina and silica.

14. A electromagnetic wave absorber according to any one of claims 1 to 8,12 and 13, wherein a volume ratio of said ceramic to the composite magnetic particle is 10 to 75 %, and said ceramic is embedded in said magnetic metal grains.

15. A electromagnetic wave absorber according to any one of claims 1 to 8 and 12 to 14, wherein an average crystal grain size of said composite magnetic particle is smaller than 50 nm.

16. A electromagnetic wave absorber according to any one of claims 1 to 8 and 12 to 15, wherein the surface of said composite magnetic particle is coated with a material having an electric resistivity higher than an electric resistivity of said composite magnetic particle.

17. A electromagnetic wave absorber according to any one of claims 1 to 8 and 12 to 16, wherein said composite

magnetic particle has an aspect ratio larger than 2, and has an oblate shape.

18. A electromagnetic wave absorber according to any one of claims 1 to 8 and 12 to 17, wherein said composite magnetic particles are uniformly dispersed in said material having the high electric resistivity.

19. A electromagnetic wave absorber according to any one of claims 1 to 8 and 12 to 18, wherein said oblate composite magnetic particles are oriented in one direction in said material having the high electric resistivity.

20. A electromagnetic wave absorber according to any one of claims 12 to 19, wherein said material having the high electric resistivity is a polymer material or a ceramic sintered material.

21. A semiconductor device in which a semiconductor element mounted on a printed wiring board is sealed with a resin containing an electromagnetic wave absorber, wherein said resin in the side of said element is covered with a resin free from said electromagnetic wave absorber.

22. A printed wiring board comprising a wiring circuit on an insulation board, and said circuit is covered with an insulation layer, wherein layers comprising an electromagnetic wave absorber are formed on a surface of said insulation board opposite to the surface having said wiring circuit formed and on said insulation layer.

23. A semiconductor device, wherein a semiconductor element mounted on a printed wiring board is covered with a

metal cap of which an inner peripheral surface is formed of an electromagnetic wave absorber.

24. A semiconductor device, wherein a semiconductor element mounted on a printed wiring board is covered with a cap having an electromagnetic wave absorber.

25. A semiconductor device, wherein a printed wiring board and a semiconductor element mounted on said board are covered with a casing having an electromagnetic wave absorber.

26. A semiconductor device, wherein a printed wiring board and a semiconductor element mounted on said board are covered with a metal casing of which an inner peripheral surface is formed of an electromagnetic wave absorber.

27. An optical sending or receiving module comprising at least one of a light emitting element and a light receiving element; and at least one of a sending circuit and a receiving circuit on a circuit board, wherein said circuit board, said element and said circuit are covered with a member having an electromagnetic wave absorber.

28. An optical sending or receiving module comprising at least one of a light emitting element and a light receiving element; and at least one of a sending circuit and a receiving circuit on a circuit board, wherein said circuit board, said element and said circuit are covered with a metal cap of which an inner peripheral surface is covered with a member having an electromagnetic wave absorber.

29. An optical sending or receiving module comprising at

least one of a light emitting element and a light receiving element; and at least one of a sending circuit and a receiving circuit on a circuit board, wherein said circuit board, said element and said circuit are covered with a member having an electromagnetic wave absorber, and an outer peripheral surface of said member is covered with a metal cap.

30. An optical sending or receiving module according to any one of claims 27 to 29, wherein said circuit board, said element and said circuit are covered with insulation resin.

31. An automatic tollgate comprising a tollgate roof; an entrance portion antenna arranged in an entrance side to a vehicle passing through the tollgate; an exit portion antenna arranged in an exit side to the vehicle passing through the tollgate; an electronic toll collection system for sending and receiving information between a road-side communication unit and an in-car unit mounted on said vehicle, wherein an electromagnetic wave absorber comprising magnetic metal particles and ceramic is formed on a surface of said gate roof in the running side of said vehicle, and surfaces of columns for supporting the entrance portion antenna and the exit portion antenna.

32. An automatic tollgate comprising a tollgate roof; an entrance portion antenna arranged in an entrance side to a vehicle passing through the tollgate; an exit portion antenna arranged in an exit side to the vehicle passing

through the tollgate; an electronic toll collection system for sending and receiving information between a road-side communication unit and an in-car unit mounted on said vehicle, wherein an electromagnetic wave absorber compounded composite magnetic particles having magnetic metal grains and ceramics and a material having an electric resistivity higher than an electric resistivity of said composite magnetic particle is formed on a surface of said gate roof in the running side of said vehicle, and surfaces of columns for supporting the entrance portion antenna and the exit portion antenna.

33. An automatic tollgate according to any one of claims 31 and 32, wherein said electromagnetic wave absorber has a multi-layer structure which has impedance higher in an incident side of electromagnetic wave than impedance in the opposite side.

34. An electronic device , wherein an electronic element mounted on a printed wiring board is sealed with a resin containing an electromagnetic wave absorber.

35. A printed wiring board comprising a wiring circuit on an insulation board, wherein a layer having an electromagnetic wave absorber is formed on at least one of a surface of said insulation board having said wiring circuit and on a surface opposite to said surface having said wiring circuit.

36. An electronic equipment casing, wherein an electromagnetic wave absorber is formed on an inner

peripheral surface of a metal casing having an opeing portion.

37. An automatic tollgate comprising a tollgate roof; an entrance portion antenna arranged in an entrance side to a vehicle passing through the tollgate; an exit portion antenna arranged in an exit side to the vehicle passing through the tollgate; an electronic toll collection system for sending and receiving information between a road-side communication unit and an in-car unit mounted on said vehicle, wherein an electromagnetic wave absorber comprising magnetic metal particles and ceramic is formed on surfaces of said tollgate and a member near the tollgate which reflects an electromagnetic wave.